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Commentary

Workplace dietary improvement initiatives ought not to be discouraged by modest returns from low-intensity interventions

We would like to thank Maes and colleagues for their timely and comprehensive summary of European-based studies on the effectiveness of workplace-based interventions to promote healthy eating.[1] Their broad inclusion in particular, of a wide range of study designs and efforts to grade both study reporting and intervention quality are to be commended. However, they may be doing their own efforts a disservice, in that their discussion and conclusions seem overly cautious and conservative. For example, the results cited include:

- 18 of 30 studies showing positive effects on dietary behaviour
- 6 of 7 multi-component studies of dietary behaviour reporting improvement
- 5 of 17 'nutrition only' interventions seeing sustained positive changes, at 6-month post-intervention follow-up.

Given the widely acknowledged difficulties around implementing sustainable dietary behaviour change, we feel that the review as presented should be considered as encouragement for further workplace-based interventions, aimed at improving dietary quality. Another recent review not restricted to European-only studies also found that worksite health promotion programmes were associated with moderate improvements in dietary intake.[2]

For the current review, in the classic prevention paradox territory of Geoffrey Rose,[3] extrapolating the marginal individual-level gains to a broader population platform might well translate into worthwhile behaviour changes or health benefits. Of course, publication bias is possible, although the authors highlight that this was not their general impression from the spread of findings within the identified reports. On study quality, although 11 of the 30 European studies included were of the relatively weak 'case-study' or 'before and after' designs, that proportion still implies that the majority were of more robust designs. Additionally, as the authors themselves acknowledge in the penultimate paragraph of the discussion, there is now a real consensus around the limitations of randomized controlled trial designs for the evaluation of complex public health interventions such as workplace-based programmes. And yet the grading system used within the review is almost entirely constructed around the extent to which randomized controlled trial-derived evidence was available. Other potentially more appropriate evidence appraisal systems, such the Obesity Prevention Framework, developed by Swinburn and colleagues,[4] which is based around 'levels of promise' linked to likely population impact, are appropriately referred to in the discussion. We recently used a modification of this framework in combination with Swinburn et al's ANGELO matrix (Analysis Grid for Environments Linked to Obesity)[5] to summarize the international evidence base around obesity prevention for policymakers in Scotland.[6]

One aspect of the reported studies that does highlight gaps in the evidence base, and which is also acknowledged as a concern in the article, is the relatively poor quality of the interventions that were found. Perhaps a greater source of concern for researchers in this area, however, is the almost universally low *intensity* of the different types of experimental intervention found in this collection of European studies. Most of the measures described, including those under the grouping of 'Environmental' approaches, are concerned largely with information provision and stop short of any meaningful incentives other than the typically heavily 'discounted' prospect of future health and well-being. Although carried out in USA, French's[7] demonstration of the effectiveness of 'real cash discounts' in promoting the uptake of healthier vending choices is worthy of note, particularly because the target populations included adolescents and blue-collar workers. It is clearly no fault of the authors that more intense interventions and policies remain largely untested in European workplaces. However, it should remind us to be a little less ready to dismiss the working environment as a setting for obesity prevention. Granted the additional financial incentives around insurance health premium reduction might go some way to explaining the rather more convincing findings of US-dominated reviews, such as that by Anderson *et al.*[8] Stronger traditions (and infrastructures) for active travel,[9] as well as a better dietary starting point in many European countries, should surely help facilitate success levels at least equivalent to that in US workplaces. Again, however, those interventions must be of sufficient 'dose' and intensity and be accompanied by the right incentives as a kick start.

We would urge, therefore, that this welcome and timely review of European studies by Maes and colleagues should not discourage researchers or employers from exploring the workplace as a setting for health promotion and dietary improvement initiatives. What are 'workplace environments' after all but a microcosm of society at large and, indeed, 'complex systems' in their own right? As such, they probably represent one of our best means of testing out the right mix of policy and environmental interventions for addressing obesity by allowing for the scaling up of multi-component approaches from relatively homogeneous workplace populations. Results of such studies could then be used to populate complex system models,[10] which are likely to play an increasingly critical role in informing society-wide solutions to this most intractable of modern epidemics.

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